



Is It Proportional?

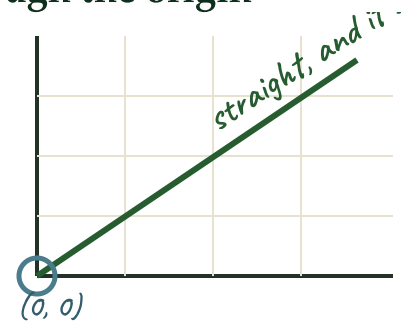
Proportional: $y \div x$ is the same for every pair, and the graph is a straight line through $(0, 0)$.

1 Table test: divide y by x on every row

x	2	5	8
y	5	12.5	20
$y \div x$	2.5	2.5	2.5

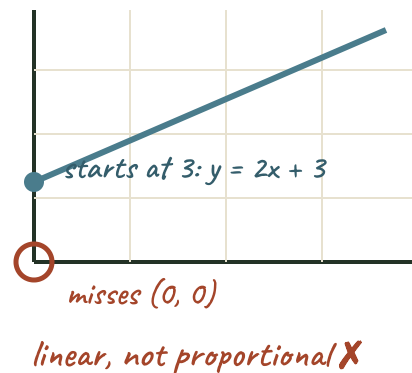
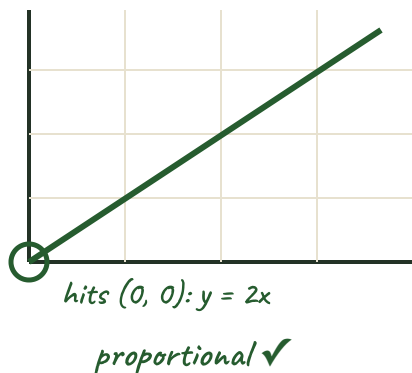
Divide on every row. If every quotient is the same, the number is k and the table is proportional. If any quotient differs, it is not.

2 Graph test: straight AND through the origin



Both words matter. A curve through the origin fails. A straight line that misses the origin fails.

! Linear but not proportional



Both lines are straight. The \$3 starting fee moves the line off the origin, so $y \div x$ keeps changing: 5, 3.5, 3. . . Zero of one must mean zero of the other.